

Attachment B

Renewable Energy Generation Project Technical Information

Address: Burma Road (also known as Defense Highway), Middletown, RI 02842 and Portsmouth, RI 02871,

Coordinates: Tank Farm 4: [REDACTED] B(9)
Tank Farm 5: [REDACTED]
McAllister Landfill: [REDACTED]

Site Owner: US Navy, Naval Station Newport

Type: Ground-mounted fixed-tilt or single-axis tracking solar PV systems.

Utility: National Grid (Narragansett Electric)



Brief Description of Project

The Solar Breakers project is a 21MW AC (29MW DC) solar energy facility being built across three separate sites at Naval Station Newport. Two 10MW AC plants will be built on brownfields that were formerly tank farms that supplied Navy ships with fuel. Tank Farm 4, in the Town of Portsmouth, will host approximately 10MW AC (14MW DC). The site will use an estimated 40,000 solar panels, each rated at 335 to 360 Watts. Tank Farm 5, in the Town of Middletown, will be the same size. The closed McAllister landfill, also in the Town of Middletown, will provide 1MW AC (1.4MW DC). The site will use an estimated 4,000, 335-360W solar panels and have approximately 800 concrete ballast block bases resting on the land surface.

Site Setbacks: Solar facilities at the three sites will be developed and built according to the

guidelines and limitations of the Environmental Condition of Property (ECP) document (see **Attachment C**). Each solar site will be built within the “Estimated Solar Project Footprints” outlined in the Site Plans of the ECP. These footprints take into consideration the site conditions, restricted and protected areas, buffers, and excluded zones.

Design Reviews: Appendix A to this Attachment B is the Design and Construction Submittal Requirement List for the required design reviews.

Preliminary Site Plans: Appendix B to this Attachment B, entitled “NAVSTA Newport Solar Project” shows the lease areas, preliminary solar project footprints, and fence lines. These will be updated in accordance with the design reviews.

Permit Process: After development in collaboration with Navy personnel, the design plans and specifications and work plans will be submitted to the Rhode Island Department of Environmental Management (RIDEM) and U.S. Environmental Protection Agency (USEPA) for their review and approval.

[REDACTED]

B(4)

Power Sales: The renewable energy electricity from the sites will be sold to large electricity users in Rhode Island or elsewhere in New England. Solar Breakers has been marketing this output in close coordination with the Navy.

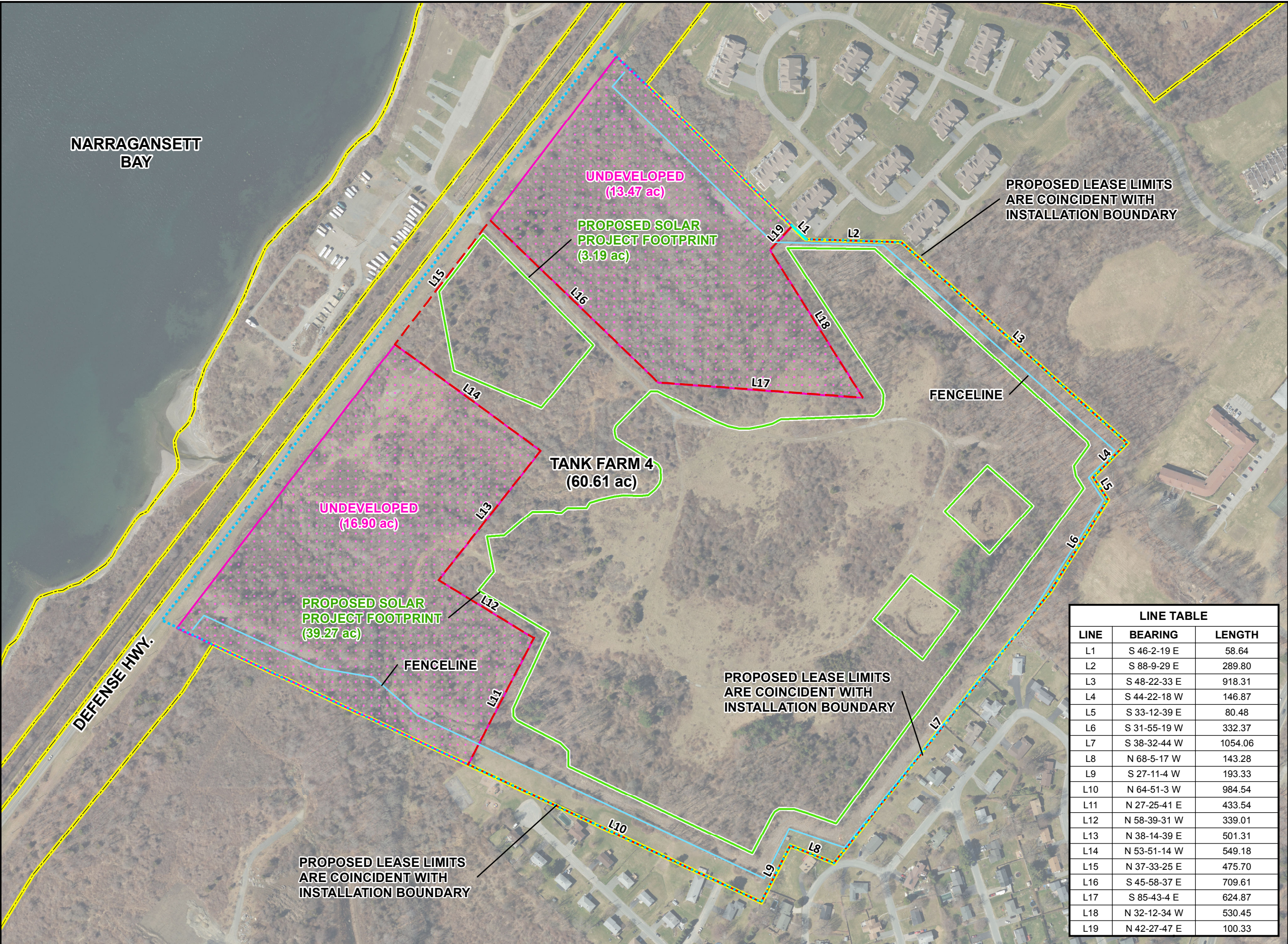
Project Schedule: The three solar facilities are scheduled to be completed in 2019.

Participants: BQ Energy is the project developer for all three sites. Renua Energy Inc., a Service-Disabled Veteran Owned Small Business, is responsible for the site civil and electrical design. JEM Engineering Services is managing the interconnection process.

Appendix A - Design and Construction Submittal Requirement List

Design Phase	Required Submittal List
30% Design	Site Layout Diagram (site plan, key plan)
	Existing and new one-Line Diagrams
	Equipment Layout Diagram (Electrical arrangement/Elevation drawings)
	Show removals and relocations, if any. If extensive, provide separate drawing(s)
	Interconnection Diagram (Substation or Line tap)
	All applicable design studies
	All applicable design calculations including equipment ratings
	List Equipment Specification/Manufacture data sheets
	Civil/Structural Drawings and Calculations
	Grounding Details
60% Design	All previous design comments shall be incorporated
	Detailed Civil/Structural Calculations
	Detailed Civil/Structural Drawings
	Detailed new and existing One-Line Diagram
	Detailed Equipment Layout Diagram (Electrical arrangement/Elevation drawings)
	Detailed applicable design calculations including equipment ratings
	Interconnection Diagram (Substation or Line tap)
	Cable/Conduit Layout and Panel Schedule
	Detailed Grounding Details
	Approved Vendor Diagrams, Equipment Specification/Manufacture data sheets
	Bill of Material (BOM)
90% Design	Site Layout Diagram (site plan, key plan) indicating new changes.
	All previous design comments shall be incorporated
	Complete and approved one-Line Diagrams
	Complete Equipment Layout Diagram (Electrical arrangement/Elevation drawings)
	Show removals and relocations, if any. If extensive, provide separate drawing(s)
	Interconnection Diagram (Substation or Line tap)
	Cable/Conduit Layout and Panel Schedule
	Complete Grounding Details
	All applicable design studies and reports (i.e. Load flow, Fault Analysis, Short Circuit, Arc Flash, and Relay Coordination)
	Bill of Material (BOM)
	Approved Vendor Diagrams, Equipment Specification/Manufacture data sheets
As-Built Design	Complete approved above listed drawings and documents
	Operation and Maintenance Manual (including Sequence of Control Operation)
	Equipment commissioning, start-up, and functional testing reports
All utilities connecting to the installation infrastructure will need to be reviewed for technical compliance. Any information labeled as "proprietary" will need to be made available for review by designated government personnel.	

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NAVSTA NEWPORT
SOLAR PROJECT

SHEET 1 of 3

TANK FARM 4

Legend

FONSI Limit
(Area 93.68 AC)

Proposed Lease Limits

Undeveloped Area

Fenceline

Installation Boundary

Proposed Solar
Project Footprint

Sources:

Proposed lease limits survey prepared
by Louis Federici Associates, dated
2/7/2018.

Proposed solar array survey prepared
by Crawford & Associates, dated
6/16/2017.

N

0 100 200 400
Feet

NAD 1983 HARN StatePlane Rhode Island FIPS 3800 Feet

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Mapped By: J. Casavant
Reviewed By: R. Allahar
Map Created: 2/13/2018
Cadastral Project #: CSS-200-17-107

NAVFAC

Naval Facilities Engineering Command

AM1 Cadastral

AM-1 Mid-Atlantic
Norfolk, VA 23511
(757) 341-0270

NARRAGANSETT BAY

PROPOSED LEASE LIMITS ARE COINCIDENT WITH FENCELINE

PROPOSED SOLAR PROJECT FOOTPRINT (3.83 ac)

McALLISTER LANDFILL (8.3 ac)

SEE SHEET 3 of 3

PROPOSED LEASE LIMITS ARE COINCIDENT WITH FENCELINE

DEFENSE HWY.

FENCELINE

TANK FARM 5 (64.76 ac)

PROPOSED LEASE LIMITS ARE COINCIDENT WITH INSTALLATION BOUNDARY

PROPOSED LEASE LIMITS ARE COINCIDENT WITH FENCELINE AND INSTALLATION BOUNDARY

FENCELINE

PROPOSED SOLAR PROJECT FOOTPRINT (28.31 ac)

PROPOSED LEASE LIMITS ARE COINCIDENT WITH INSTALLATION BOUNDARY

GREENE LN.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 60-13-58 W	18.91
L2	N 51-40-14 W	34.99
L3	N 59-57-58 W	339.94
L4	N 29-58-17 E	326.59
L5	S 64-35-12 E	553.86
L6	N 27-28-28 E	807.18
L7	N 62-14-52 W	534.48
L8	N 24-46-18 E	666.31
L9	S 60-27-6 E	871.89
L10	S 31-48-13 W	150.68
L11	S 58-11-46 E	570.00
L12	S 16-30-55 W	369.82
L13	S 56-39-50 E	316.74
L14	S 15-31-35 W	640.36
L15	N 69-30-28 W	37.33
L16	S 15-38-9 W	783.54
L17	N 59-47-14 W	431.72
L18	N 57-31-11 W	459.95
L19	N 51-8-52 W	119.96
L20	N 53-18-13 W	286.03
L21	N 53-51-19 W	42.84
L22	N 57-33-17 W	262.24
L23	N 52-51-57 W	87.22

NAVSTA NEWPORT SOLAR PROJECT

SHEET 2 of 3

TANK FARM 5

Legend

- FONSI Limit (Area 66.73 AC)
- Proposed Lease Limits
- Undeveloped Area
- Fenceline
- Installation Boundary
- Proposed Solar Project Footprint

Sources:

Proposed lease limits survey prepared by Louis Federici Associates, dated 2/9/2018.

Proposed solar array survey prepared by Crawford & Associates, dated 6/16/2017.



0 150 300 600 Feet

NAD 1983 HARN StatePlane Rhode Island FIPS 3800 Feet

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NARRAGANSETT
BAY

PROPOSED SOLAR
PROJECT FOOTPRINT
(3.83 ac)

PROPOSED LEASE LIMITS
ARE COINCIDENT WITH
FENCELINE

McALLISTER
LANDFILL
(8.3 ac)

PROPOSED LEASE LIMITS
ARE COINCIDENT WITH
FENCELINE AND
INSTALLATION BOUNDARY

DEFENSE HWY.

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 83-4-21 E	24.21
L3	S 37-7-57 E	195.40
L5	S 69-42-5 W	19.09
L6	N 33-57-36 W	125.57
L7	N 61-38-22 W	90.00
L8	N 36-35-18 W	111.00
L9	N 43-13-28 W	136.00
L10	N 73-3-41 W	43.00
L12	S 84-56-2 W	48.00
L14	N 48-57-31 W	197.65
L16	N 1-20-12 W	300.00
L17	N 6-56-54 W	196.00
L19	N 25-56-24 E	173.00
L20	N 32-53-11 E	150.00
L21	N 11-2-48 E	75.00






CURVE TABLE				
LINE	CHORD BEARING	RADIUS	ARC LENGTH	DELTA ANGLE
C2	S 15-5-39 E	1479.53	1138.16	44-4-33
C4	S 28-42-37 E	1385.57	406.83	16-49-23
C11	N 84-4-21 W	158.21	60.81	22-1-20
C13	N 84-5-20 W	114.64	140.58	70-15-37
C15	N 15-34-27 W	236.47	117.52	28-28-29
C18	N 8-26-42 E	263.08	141.36	30-47-13

NAVSTA NEWPORT
SOLAR PROJECT

SHEET 3 of 3

McALLISTER LANDFILL

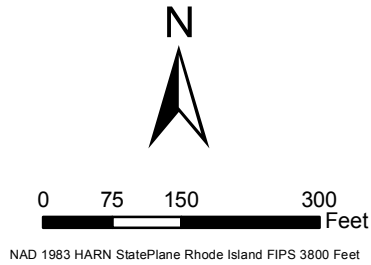
Legend

-  FONSI Limit
(Area 66.73 AC)
-  Proposed Lease
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-  Undeveloped Area
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-  Installation Boundary
-  Proposed Solar
Project Footprint

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